Exhibit

B

**IN THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE**

In re:

FTX TRADING LTD., *et al.*,

Debtors.

Chapter 11

Case No. 22-11068 (JTD)

(Jointly Administered)

EXPERT REPORT OF FOTIOS KONSTANTINIDIS

January 26, 2024

**FTX Trading Ltd., et al.,
Debtors Chapter 11**

**Expert Report of
Fotios Konstantinidis**

January 26, 2024

Table of Contents

FTX Trading Ltd., et al.,
Debtors Chapter 11

Expert Report of
Fotios Konstantinidis

January 26, 2024

Exhibits

Exhibit A……………………………………………....List of Documents Relied Upon

Exhibit B…….……………….....…………………….…...……………… Curriculum Vitae

STOUT
Dispute Consulting

**FTX Trading Ltd., et al.,
Debtors Chapter 11**

**Expert Report of
Fotios Konstantinidis**

January 26, 2024

I. Scope of Opinion and Required Disclosures

1. This report presents my opinions regarding the Chapter 11 cases pending in the United States Bankruptcy Court for the District of Delaware (the "Chapter 11 Cases") relating to FTX Trading Ltd. and its affiliated debtors and debtors in possession (collectively, "FTX" or the "Debtors"). In addition, this report contains a summary of the information I considered in the development of my opinions and a statement of qualifications. My opinions, detailed herein, are based on the data available to me as of the date of this report and summarized below. I reserve the right to update my opinions should any additional information be discovered relating to this matter.

2. I have no prior relationship with FTX, creditors, or legal counsel representing either party in this proceeding.

3. A detailed list of the sources of information considered is presented in *Exhibit A*.

4. Stout Risius Ross, LLC ("Stout") was asked by DLA Piper LLP ("Counsel") to assist with reviewing and analyzing the Reports submitted by the Debtors' Experts. This includes assessing the data and methodologies used in the Expert Reports and, if applicable, applying alternative valuation methodologies to determine the value of the digital assets claimed by creditors (in USD equivalent).

5. Stout is compensated at a rate of $800 per hour for time incurred by me. Other individuals from Stout provided assistance to me, under my supervision, in this matter; their hourly rates range from $275 per hour to $800 per hour.

`

II. Qualifications

6. I am a data scientist with a M.S. (2003, outstanding M.S. award) in Computer Science, specialized in data mining, a M.S. (1999) in Geophysics and Space Physics and I have completed (non-degree, 2000) the M.S. requirements in Chemical Engineering at the University of California, Los Angeles ("UCLA"). I have also taught undergraduate data mining classes as a Teaching Assistant at the Computer Science department at UCLA.

7. During my academic career, I have analyzed satellite data that capture planetary magnetic fields, performed DNA sequence analysis and analyzed chemical reaction data. After my graduate studies, I worked as a Computational Brain Researcher in a National Institutes of Health ("NIH")-funded Neuro Imaging Lab at UCLA, where I analyzed brain imaging data from patients with brain diseases, such as Alzheimer's disease.

8. I have published more than 15 articles in peer-reviews journals, workshops and conferences in data analysis, as applied in planetary magnetic field data, reaction engineering data, and brain imaging data, among others.

9. During my graduate career, I have been a member of the International Society for Computational Biology ("ISCB"), the Institute of Electrical and Electronics Engineers ("IEEE") Computer Society, the Association for Computing Machinery ("ACM"), and the American Institute of Chemical Engineers ("AIChE").

10. I have more than 20 years of academic, consulting and industry experience in data mining, advanced statistics and data analytics. I am currently a Managing Director at Stout leading the Digital and Data Analytics practice. Stout is a leading financial advisory firm serving global and middle market clients. Stout focuses its services in the areas of Investment Banking & Restructuring; Transaction Advisory; Valuation Advisory; Accounting & Reporting Advisory; Disputes, Claims & Investigations; and Specialty & Industry Services.

11. During my work at Stout, I have been applying statistical and machine learning methods to value complex securities, structured products, digital assets, cryptocurrencies and NFTs for financial reporting and tax purposes. I have developed data analytics and statistical models to value a wide range of asset classes, including structured products, warrants, mortgage-backed securities and digital assets. I regularly advise publicly traded and privately-owned companies, including hedge funds, private equity funds, lenders, accounting firms, and law firms. I work closely with CFOs, CIOs, portfolio managers, and risk management professionals in the context of fair value for financial reporting purposes. Some recent cryptocurrency-related matters I led were: a) Valuation of all cryptocurrency holdings in the Celsius Network LLC, et al. bankruptcy, b) Valuation of a portfolio of illiquid digital assets for IRS purposes, c) Valuation of NFT holdings for two investment firms.

5

**FTX Trading Ltd., et al.,
Debtors Chapter 11**

**Expert Report of
Fotios Konstantinidis**

January 26, 2024

12.   Prior to joining Stout, I was a Senior Vice President in one of the biggest credit union service organizations ("CUSOs") in the United States, CO-OP Solutions, where I was the product leader for all AI-driven products, including an AI-based fraud platform used by thousands of credit unions and blockchain-based identity products. Before CO-OP Solutions, I was an Associate Partner in the Digital Practice of McKinsey & Company, where I was responsible for leading engagements in Fortune 100 companies, applying advanced statistical methods to large amounts of data ("Big Data"). I have also worked as a Senior Director at Visa, where I was the Connected Car lead, responsible for deploying data-driven, blockchain-based prototypes with applications in the payments industry.

13.   My curriculum vitae is included in ***Exhibit B*** and lists in detail my professional and academic experience, academic awards, recent testimony, relevant presentations, and journal and conference publications.

14.   With the aforementioned academic background and professional experience, I am well established to offer the opinions contained herein.

6

III.   Summary of Opinions

Introduction

15.   This report focuses on the analysis performed related to the MAPS, OXY and SRM cryptocurrency tokens, as presented in the expert report of Sabrina T. Howell ("Howell Report") and the expert report of Kevin Lu ("Lu Report") in support of the motion of the Debtors to estimate claims filed by customers holding digital assets (the "Token Estimation Motion").

16.   The Lu Report explains the methodology used by Coin Metrics to provide pricing for certain spot assets (which include MAPS, OXY and SRM) listed on the FTX exchanges, as of November 11, 2002 (the "Petition Date")[1] and at 10 AM Eastern Time ("Petition Time")[2] (collectively, "Petition Date and Time"). The Howell Report uses the prices and trading volume provided by Coin Metrics for certain digital assets (including MAPS, OXY and SRM) to calculate valuation discounts and value the FTX cryptocurrency holdings as of the Petition Date. The two main discounts applied in the Howell Report to the aforementioned cryptocurrencies are: (a) the asset liquidation discount and (b) the discount for lack of marketability ("DLOM"). MAPS, OXY and SRM are categorized in the Howell Report as "non-marketable digital assets"[3] and they are split into three sub-categories (LOCKED, CUSTOM or "non-marketable options of underlying tokens") based on the presence of a "vesting" or "unlocking" schedule.

17.   MAPS[4] is a cryptocurrency token (launched in October 2019; total supply capped at 10 billion tokens) used within the Maps.me platform, a popular offline mapping and travel-booking app with 140 million users worldwide. The token holders can earn and redeem MAPS tokens for various benefits within the Maps.me application, including discounts on accommodation bookings and other travel services, personalized promotions and exclusive offers, and priority access to features and services within the application. Maps.me 2.0, which is the next evolution of the Maps.me platform, offers an integrated digital wallet for storing and managing MAPS tokens alongside fiat currencies. This new version also offers enhanced navigation and travel planning as well as in-app payments for bookings, peer-to-peer transfers between users and international fund transfers with lower fees. In summary, MAPS is a utility token specifically designed for use with the Maps.me ecosystem. Its value is derived from its potential to unlock various benefits and functionalities within the application. Since the total supply is generally limited, it ensures scarcity and potentially contributing to long-

---

[1] Petition Date was November 11, 2022.

[2] Petition Time was 10:00 a.m. ET.

[3] Section I (pg. 37) of Howell Report.

[4] Maps - White Paper, January 2021: https://maps.me/token/MAPS.pdf; MAPS,me mobile application URL at: https://maps.me/

term value appreciation. Finally, the MAPS token is native to the Solana blockchain[5]; it is also available in the Ethereum blockchain.

18.   OXY[6] is a cryptocurrency token (launched in October 2021 with a total supply of 10 billion tokens) designed for use within the Oxygen Protocol ecosystem. The main objective of the Oxygen Protocol is to provide users with a more accessible and efficient alternative to traditional prime brokerage services, offering features such as leveraged trading (borrow funds to maximize returns), term liquidity (lock up assets for a fixed period to earn interest), passive yield (earn rewards from various platforms activities) and borrowing to short (utilize borrowed funds against the price of an asset and profit from its decline). OXY is a utility token and its value is derived from its role in accessing platform features, governance participation and earning rewards. Just like MAPS, the total supply is capped to create scarcity and, consequently, long-term value appreciation. OXY is native to the Solana blockchain; it is also available in the Ethereum blockchain.

19.   The SRM[7] token is the native utility token (launched in August 2020; total supply capped at 10 billion tokens) of the Serum (built on the Solana blockchain) decentralized exchange (DEX)[8]. SRM plays a crucial role in the Serum platform, by functioning as a payment token (trading fees are paid in SRM), governance token (SRM holders influence the protocol's future development), staking token (SRM can be locked for a period of time to earn rewards) and discount token (SRM holders receive discounts on trading fees). SRM was launched by the Serum Foundation, a non-profit organization established by Alameda Research and FTX. In conclusion, SRM is an integral part of the Serum DEX ecosystem, powering its operations, incentivizing participation and enabling governance.

---

[5] Tokens native to the Solana blockchain are named Solana Program Library (SPL) tokens. Tokens that reside in the Ethereum blockchain are named ERC-20 (short for Ethereum Request for Comment 20) tokens, due to the technical standard they follow.

[6] "Oxygen: The Prime Brokerage Protocol", White Paper, December 2020: https://www.oxygen.org/Oxygen.pdf

[7] "Serum – White Paper", July 2020: https://assets.website-files.com/61382d4555f82a75dc677b6f/61384a6d5c937269dbed185c_serum_white_paper.88d98f84.pdf

[8] A decentralized exchange (DEX) is like a "digital flea market" for cryptocurrencies. Instead of buying and selling through a single company (as it is the case in traditional "centralized" exchanges), the buyers and sellers deal directly with each other, in a peer-to-peer fashion. As a result, there is no middleman, transaction fees are lower and all transactions are publicly recorded on a blockchain, making the system more transparent.

Criticism of the Model Inputs Used in the Howell Report

20.   The Howell Report applies the following methodology to the valuation of MAPS, OXY and SRM tokens:

   a. Uses Coin Metrics pricing data that were collected from the last 60 minutes before the Petition Date and Time. The prices of the three cryptocurrencies (as of the Petition Date and Time) are calculated as volume-weighted averages[9] from prices collected from selected cryptocurrency exchanges.

   b. Uses Coin Metrics trading volume data from the 12-month interval between November 2, 2021 to November 1, 2022 to calculate the average daily trading volume as of the Petition Date and Time. The average daily trading volume is used as input to the discount methods used in the next step.

   c. Calculates two discounts for the three cryptocurrencies:

      i. Asset Liquidation Discount: Discount applied due to the large numbers of tokens that have to be liquidated. The methodology is based on an academic paper which uses portfolio transitions data from the early 2000s to derive a model that calculates transaction costs. This discount is calculated at 100.0% for MAPS and OXY and 58.3% for SRM. As a result, all MAPS and OXY tokens are deemed worthless.

      ii. Discount for Lack of Marketability ("DLOM"): Discount applied due to the vesting schedule that permits the sale of locked at specified intervals over a multi-year period. This discount is calculated[10] at 42.4% and 43.3% for MAPS, 37.8% and 40.2% for OXY and 32.6% and 32.8% for SRM.

   d. Combines both discounts and applies them to the three cryptocurrencies.

21.   **Estimation Period Was Arbitrarily Selected.** The "Estimation Period" for the calculation of the average daily trading volume, volatility, and returns was arbitrarily selected[11] to reach back more than one year prior to the Petition Date[12], i.e., November 2, 2021 through November 1, 2022. The period from November 2, 2022 through the Petition Date is ignored by the Howell Report, due to the publication of a CoinDesk article[13] related to

---

[9] The spot price is calculated as an average of all prices of all selected markets, where the markets with the higher volume have bigger impact on the price.

[10] DLOM for LOCKED category. Figure 14 of the Howell Report. In addition, Figure 15 of the same report provides DLOM values for CUSTOM tokens.

[11] Appendix C-III of the Howell Report.

[12] The Petition Date was November 11, 2022.

[13] Allison, Ian, "Divisions in Sam Bankman-Fried's Crypto Empire Blur on His Trading Titan Alameda's Balance Sheet," CoinDesk, November 2, 2022, available at

9

Alameda's balance sheet, which is believed to have had a materially detrimental effect on the value of the relevant cryptocurrencies. However, among the main inputs (for valuation purposes) should have been the average daily trading volume and spot prices for all cryptocurrencies, as of the Petition Date. However, the Howell Report assumes that the volumes and prices of FTX's digital assets were not accurate after November 2, 2022 and should not have been used to calculate the average daily trading volume that corresponds to the Petition Date. This contradicts the approach followed by the Lu Report, which uses[14] volume and pricing data from the 60 minutes prior to the Petition Date and Time. If the assumptions of the Howell Report are valid, then the Lu Report should have also used the volume and pricing data before November 2, 2022 to calculate spot prices as of the Petition Date. In addition, the Howell Report states[15] that "a longer Estimation Period generally reduces error". These inconsistencies call into question the validity of both the Lu and Howell valuation methodologies as applied, and cannot yield an accurate estimate for data analysis purposes.

22.   The Estimation Period depends on the valuations to be performed, and a shorter (or a longer) estimation period may have been more appropriate. No sensitivity analysis was performed to find the optimal Estimation Period, especially for cryptocurrency data, which is subject to high volatility and as to which the average trading volume for different periods can wildly fluctuate. For example, using the same volume data and the same methodology utilized in the Howell Report, for the 6-month period between May 11, 2022 and November 10, 2022, the average daily trading volume for the three cryptocurrencies would be:

   a. MAPS: 505,005 token units (0.99 times lower than the volume used).

   b. OXY: 2,722,420 token units (1.57 times higher than the volume used).

   c. SRM: 30,044,682 token units (1.19 times higher than the volume used).

23.   **Trading Price Data Sources Are Too Limited**. The Howell Report's exclusive reliance on Coin Metrics pricing data is unwarranted. If, instead, the data available from three established cryptocurrency data aggregators (CoinMarketCap[16], Coingecko[17] and Coinpaprika[18]) were used as a data source, the daily trading volume for MAPS, OXY and SRM (for the

---

https://www.coindesk.com/business/2022/11/02/divisions-insam-bankman-frieds-crypto-empire-blur-on-his-trading-titan-alamedas-balance-sheet.

[14] Section V of Lu Report.

[15] Appendix C-III.A of the Howell Report.

[16] CoinMarketCap cryptocurrency data API: https://coinmarketcap.com/api/.

[17] CoinGecko cryptocurrency data API: https://www.coingecko.com/en/api.

[18] Coinpaprika cryptocurrency data API: https://coinpaprika.com/api/.

Estimation Period used in the Howell report) would be much higher than the values used in the Howell Report. More specifically, according to:

    a. CoinMarketCap: the daily trading volume (in token units) for MAPS was 1,822,603 (3.6 times higher than volume in Howell Report) and for OXY, the volume was 3,762,560 (2.2 times higher than volume in Howell report), and for SRM, the volume was 48,773,498 (1.9 times higher than volume in Howell Report).

    b. CoinGecko: the daily trading volume for MAPS was 2,207,060 (4.3 times higher than the one used in the Howell Report) for OXY, the volume was 3,616,875 (2.1 times higher than volume in Howell Report) and for SRM 48,680,976 (1.9 times higher than volume in Howell Report).

    c. Coinpaprica: the daily trading volume for MAPS was 1,467,296 (2.9x higher than volume in Howell Report) and for SRM the volume was 20,637,818 (0.82 times lower than the one used in the Howell Report); the platform does not provide data for OXY for the period of interest.

We see no basis—and the Howell Report proffers none—for excluding these other exchanges from consideration.

24.   The Howell Report also only considers trading volumes from Centralized Exchanges ("CEXs" or "CEX" as not plural) and completely ignores trading volume which takes place in Decentralized Exchanges ("DEXs" or "DEX" as not plural).[19] However, MAPS, OXY and SRM exist in the Solana and Ethereum blockchains, and they have trading volume in DEXs. Transactions that take place in the blockchain ("on-chain" transactions) are permanently recorded, validated and visible to everyone. They also include a portion of CEX transactions[20]. Therefore, I queried[21] the Solana blockchain and found the following volumes for the three relevant cryptocurrencies:

    a. MAPS: 1,790,766 token units (3.5x higher than the volume in the Howell Report)

---

[19] Transactions that take place in CEXs happen outside the main blockchain ("off-chain" transactions) because such transaction are faster, cheaper and offer greater privacy, among other reasons.

[20] It includes certain CEX transactions, such as initial deposits, withdrawals, batch settlements and transfers.

[21] Used Dune Query (https://dune.com/browse/queries) and SolScan (https://solscan.io/) to extract data from the Solana blockchain for dates 12/14/2021 – 11/1/2022. The queries were optimized for this date range and did not start on 11/2/2021 due to data limitations. Also, manually removed large transactions made by Alameda Research LLC in December 2022 (https://cointelegraph.com/news/alameda-wallets-become-active-days-after-sbf-bail-community-mulls-foul-play). However, the Alameda transactions are legitimate transactions and prove that large transactions of cryptocurrencies are absorbed by the market. If one considers them, the average daily, on-chain volume for MAPS, OXY and SRM ends up even higher.

     b. OXY: 3,319,249 token units (1.9x higher than the volume in the Howell Report)

     c. SRM: 29,888,903 token units (1.2x higher than the volume in the Howell Report).

In addition, it is noted that the actual volume will be higher from these values, since all three tokens also exist in the Ethereum[22] blockchain. Moreover, based on the data we collected, there was significant volume in the Raydium[23] platform during the Estimation Period, which is also ignored in the Howell Report. Finally, it is noted that the Howell Report ignores trading volume due to SRM futures trading in reliable and established markets, such as Huobi[24].

25.   The Howell Report and the Lu Report also use different cryptocurrency exchanges for the trading volume of MAPS, OXY and SRM. More specifically:

     a. MAPS: The trading volume that the Howell Report uses is based on three exchanges: Gate.io, FTX, and MEXC. A fourth exchange, LBANK, which has large trading volume[25] for MAPS, is excluded[26] by the Howell Report. However, the Lu Report only considers the trading volume from a single exchange, Gate.io, which is deemed[27] to be the only trusted exchange. FTX, MEXC and LBANK are rated as "low-rated exchanges", so the methodology followed in the Lu Report, contradicting that followed in the Howell Report, completely ignores them.

     b. OXY: The trading volume that the Howell Report uses is based on five exchanges: Gate.io, FTX, MEXC, Bitfinex, and Kraken. However, the Lu Report only considers the trading volume from Gate.io, Bitfinex and Kraken. MEXC and FTX are deemed to be "low-rated exchanges", so the methodology followed in the Lu Report, again contradicting that followed in the Howell Report, completely ignores them.

---

[22] Their volume is generally lower in the Ethereum blockchain compared to the Solana blockchain.

[23] Raydium (https://raydium.io/) is a decentralized exchange (DEX) built on the Solana blockchain. It integrates seamlessly with the Serum DEX and enhances liquidity by unlocking access to a wider range of cryptocurrencies and trading pairs. It supports functionality such as "yield farming", where users deposit their crypto holdings in liquidity pools and earn additional tokens as rewards for providing liquidity. Raydium has a thriving ecosystem of applications and protocols, which further contributes to its overall utility and user base.

[24] Cryptocurrency exchange Huobi changed its name to HTX in September 2023: https://www.htx.com/en-us/.

[25] If the LBANK trading volume is included, the average daily trading volume for MAPS for the Estimation Period becomes 1,669,657 units. If Raydium is also included, MAPS average daily becomes 2,320.417 units.

[26] Footnote 12, pg. 73 of Howell Report.

[27] Per the Coin Metrics Trusted Exchange Framework. Overall Rankings in pg. 37 of the Lu Report.

    c. SRM: The trading volume that the Howell Report uses is based on 18 exchanges [28]. However, the Lu Report, again excluding exchanges deemed reliable in the Howell Report, only considers the trading volume from 12 exchanges[29].

For all the foregoing reasons, the Howell Report's selection of trading price sources is too narrow and skewed to provide a valid basis for the conclusions it reaches.

26. **Spot Price Valuation Interval is Arbitrary and Unsupported**. The methodology used by the Lu Report[30] to calculate cryptocurrency spot prices, arbitrarily selects the volume (to calculate weights) and price of each cryptocurrency over the trailing 60 minutes before the Petition Date and Time (from all constituent markets[31]). However, it is not explained why the chosen interval was one hour before the Petition Date and Time, instead of a longer interval. One hour is a very short interval, during which potential material information about FTX could have become public and, as a result, the spot prices and transactional volumes could have already been influenced by this public information. A longer time interval than one hour from the Petition Time should have been selected to ensure that the cryptocurrency prices and volumes were not disproportionately affected by the actual filing of Chapter 11 petition. For example, if an interval of 12 hours prior to the Petition Date and Time was used instead, the spot prices of the three tokens would have been the following[32]:

    a. MAPS at $0.104048 (5.6% higher than the spot price used).

    b. OXY at $0.031347 (0.3% lower than the spot price used).

    c. SRM at $0.404216 (8.6% higher than the spot price used).

27. The term "95% confidence interval" is incorrectly used[33] by the Lu Report and, as a result, it does not accurately reflect statistical confidence or uncertainty related to the pricing data. The Lu Report actually calculates the 95th quantile of an artificially created variable that the Lu Report names[34] the "Root Mean Squared Difference" ("RMSD"). The RMSD is calculated for each of the seven trade count bins of all digital assets. The 95th quantile only captures those digital assets that have a RMSD value

---

[28] Bibox, Binance, Binance.US, Bitfinex, Bittrex, Bybit, CEX.io, Crypto.com, FTX, Gate.io, HitBTC, Huobi, Kraken, KuCoin, MEXC, OKX, Poloniex, Upbit.

[29] Binance, Binance.US, Bitfinex, Bittrex, Bybit, Crypto.com, Gate.io, HitBTC, Huobi, Kraken, KuCoin, OKX.

[30] Section V of the Lu Report.

[31] "Constituent market" is the term used by the Lu Report for the cryptocurrency exchanges that are selected out of the eligible exchanges for all digital assets. The prices from the constituent markets are used (volume-weighted) to calculate the spot prices of all cryptocurrencies as of the Petition Date and Time.

[32] Based on averaging all Gate.io transactions within the 12-hr interval, following similar methodology to the one applied by the Lu Report.

[33] Section VI of the Lu Report, pg.18.

[34] Pg. 19 of the Lu Report.

lower than 95% of the total assets but does not express confidence in the data inference and calculation. According to statistical theory[35], the 95% confidence interval is constructed based on sampling a population and captures the degree of certainty (95% in this case) for population parameters (*e.g.*, mean, proportion, etc.) when inferring from the sample to the population. The most common example is a poll, where the 95% confidence interval expresses the uncertainty when inferring from the sample data to the overall population.

28.   The Lu Report calculates[36] the 95th quartile, by considering all transactions in the 10 minutes prior to the Petition Date and separates the cryptocurrencies into seven bins. No specific reason is given to explain the specific choice of the time interval and the number of bins. For example, 5 or 15 minutes may have been a more appropriate interval for several cryptocurrencies. The RMSD variable is arbitrarily defined and does not capture the full magnitude of price swings in the cryptocurrency market. Outliers and extreme price movements, which are likely during high volatility periods (as it is the case in the period before the Petition Date), are not adequately factored into the calculation of the 95% quantile.

29.   The extrapolation method[37] used in the Lu Report is not accurate and it is based on a mathematical relationship that does not hold true. The assumption that the ratio of the RMSD values of two consequent trade count bins is constant, is not valid. For example, when the ratio for the q95([10, 50) bin was calculated, these are the results:

$$\frac{q95([10,50])}{95([50,100])} = \frac{q95([2,10])}{95([10,50])} \implies \frac{0.063939}{0.031465} \neq \frac{0.103681}{0.063939}$$

For all the foregoing reasons, the Howell Report's arbitrary and unwarranted selection of a trailing 60-minute spot price valuation interval further undermines the overall credibility of the Report's conclusions.

---

[35] "Sampling Techniques", Third edition, William G. Cochran, John Wiley & Sons, 1977.

[36] Section VI of the Lu Report, pg. 19.

[37] Section VI of the Lu Report, pg. 20.

14

Criticism of the Asset Liquidation Discount Used in The Howell Report

30.   The liquidation discount model used within the Howell Report is based on an academic paper by Kyle and Obizhaeva[38] (the "KO Model" or "KO Paper"). The KO Model introduces the idea of a "bet,"[39] which is not an observable variable and not equivalent to a transaction, so it cannot be accurately measured or constructed without major assumptions. The KO Paper states that "individual bets are almost impossible to reconstruct from publicly disseminated records of time-stamped prices and quantities". No practical information is given on the methodology to identify a bet in the highly volatile and unique cryptocurrency market.

31.   **KO Model Is Improperly Applied to Cryptocurrency Markets.** The foundation of the KO Model is the hypothesis that the following microstructure characteristics are constants ("microstructure invariants[40]"): (a) invariance of bets and (b) invariance of transaction costs. The dataset used by the KO paper to test invariance relationships is constructed from "400,000 portfolio transition orders[41] executed over the period 2001 through 2005 by a leading vendor of portfolio transition services"[42]. Additionally, as stated in the KO paper[43]: "[Kyle and Obizhaeva] conjecture that predictions of market microstructure invariance may generalize to other markets such as bond markets, currency markets, and futures markets, as well as to other countries. Whether market microstructure invariance applies to other markets poses an interesting set of issues for future research". However, the Howell Report never confirms that the main KO Model hypothesis is true by calculating these two invariants based on cryptocurrency data. The model's requirements have to be met before it can be used in the cryptocurrency markets.

32.   The KO Paper augments[44] the portfolio transitions data on which it primarily relies with stock price, returns and volume data from the Center for Research in Security Prices ("CRSP"), as to securities listed on the New York Stock Exchange ("NYSE"), the American Stock Exchange ("Amex"), and National Association of Securities Dealers Automated Quotations ("NASDAQ") in the period from January 2001 through December 2005. As a result, the data used by the KO Paper are (at least) 17 years older than the cryptocurrency data at issue on or about the Petition Date. Any

---

[38] Kyle, Albert S. and Anna A. Obizhaeva, "Market Microstructure Invariance: Empirical Hypotheses,", Econometrica, Vol. 84, No. 4, 2016, pp. 1345-1404.

[39] Based on the KO Paper (pg. 1349), a bet is defined as a "decision to acquire a long-term position of a specific size, distributed approximately independently from other decisions. Bets can be difficult for researchers to observe".

[40] "Market microstructure invariance" is the hypothesis, proposed by the KO Paper, that dollar risk transfer and dollar transaction costs are the same for all stocks when trades are converted to bets, calendar time is converted to business time and return volatility is converted to dollar volatility.

[41] In simple terms, portfolio transition orders are the specific instructions given by an investor to a vendor to adjust the investor's investments in various stocks and funds.

[42] KO Paper, pg. 1346.

[43] KO Paper, pg. 1401.

[44] KO Paper, pg. 1367.

assumption that trends detectible in these particular securities 17 or more years ago could be the same as those at play in the cryptocurrency market in 2022 is incorrect.

33.   According to the Howell Report, the KO Model is designed for "slow trading strategies"[45]. However, the slow trading strategy, which is assumed to be used by traders to minimize transactions costs, plays no role in the cryptocurrency market. Large amounts of MAPS, OXY and SRM can be absorbed into the cryptocurrency market and there is no reason to require a slow trading strategy. There are more than a few recent examples in the cryptocurrency trading markets where large sales took place, where the asset price was positively or negatively affected, but where the relevant price did not drop to zero. Some sample cryptocurrency transactions[46] with the corresponding price fluctuations include the following[47]:

   a.   25% of daily volume of WETH traded on 4/18/2023. Price decreased by 4.8% the following day.

   b.   56% of daily volume of LTC traded on 8/21/2023. Price decreased by 3.2% the following day.

   c.   15% of daily volume of MKR traded on 5/27/2020. Price increased by 1% the next day.

   d.   46% of daily volume of TON traded on 11/10/2021. Price increased by 26.8% the next day.

   e.   57% of daily volume of LDO traded on 11/22/2022. Price decreased by 40.1% the following day.

   f.   40% of daily volume of ALGO traded on 7/25/2023. Price increased by 1.5% the following day.

34.   The "slow-trading strategy" assumption is not only inapplicable in the cryptocurrency market, but in the traditional securities market as well. More specifically, data[48] was retrieved from S&P Global that contained U.S. public companies with low number of floated public shares (*i.e.*, a float percentage of less than 20%), where the relevant companies issued additional shares (at a discount) in a secondary offering. There were 72 cases in the last 10 years (prior to 1/17/2024) where the blocks of shares offered in the secondary offering were higher than 30% of the total outstanding shares. Moreover, 65 out of these 72 cases corresponded to

---

[45] Section C-IV of the Howell Report. Based on the KO Paper (pg. 1390), due to the "invariance principle": "the execution in business time is effectively faster for low-volume stocks and slower for high-volume stocks". As a result, large orders in stocks with low trading activity have slow executions.

[46] Dune queries were used to query blockchain data.

[47] Checked the immediate effect for the following day without focusing on other factors that may affect price of these digital assets.

[48] Collected data from S&P Global (https://www.spglobal.com/marketintelligence/en/) for the period between 1/17/2014 – 1/17/2024.

more than 30% shares sold (after the secondary offering), as a percentage of the 20-day average daily volume. Relative to the share price one day prior to the transaction, the price of the issuing companies' shares had an average price decrease of 11.6% one week after the transaction and 10.9% one month after the transaction. The obvious conclusion is that, based on U.S. Exchanges data analyzed from the last 10 years, large blocks of shares of public companies (offering at least 30% of total shares outstanding) are absorbed by the market at discounts around 10%.

35.   **Howell Report's Application of KO Papers Analysis Yields Insuppportable Results.** The Howell Report incorrectly uses Equation (38)[49] from the KO Paper to calculate the asset liquidation discount. The variable calculated, $C_{jt}(X)$, is the transaction cost function of an order of X shares of stocks:

$$C_{jt}(X) = \frac{\sigma_{jt}}{0.02} \cdot \left(\kappa_0 \cdot \left[\frac{\sigma_{jt} \cdot P_{jt} \cdot V_{jt}}{W^*} \right]^{-\frac{1}{3}} + \kappa_1 \cdot \left[\frac{X}{0.01 \cdot V_{jt}} \right]^{\frac{1}{2}} \right) \qquad (1)$$

As a result, the formula calculates transaction costs, and not asset discount. Asset discount is always a normalized number, i.e., a number between 0% - 100%. Since this formula calculates transaction costs, the numbers can be far higher than 100% or even negative[50]. Additionally, the value of the transaction costs calculated is highly dependent on coefficients that were estimated[51] (using non-linear regression) based on NYSE and NASDAQ data from the early 2000s. The asset liquidation discount used in the Howell Report is the average between the two values generated based on the NYSE and NASDAQ related coefficients. As a result, there are two different sets of coefficients used[52] (κ_0 and κ_1 values are in the order of 10^{-4}) plus a scaling constant, $W^* = (0.02)(40)(10^6)$, which is the trading activity for the benchmark stock with volatility of 2% per day, price $40 per share and trading volume of 1 million shares per day. It is unsound to use such a high-valued constant derived from an imaginary stock with 2% volatility and price of $40 and apply it to the cryptocurrency market, where volatility is very high and the prices of MAPS, OXY and SRM are significantly lower than $40 per token unit. In conclusion, the coefficients used in the transaction cost function are not universal constants and were derived from NYSE and NASDAQ datasets from the early 2000s. It is erroneous to use these same coefficients to calculate transactions costs for cryptocurrencies.

36.   Following the KO Model's methodology and formula, CoinMarketCap data was used as the data source for the spot prices and 24-hr trading volumes[53]

---

[49] Pg. 1400 of the KO paper.

[50] This statement is confirmed by reviewing the software code used to calculate this "discount". The code arbitrarily forces the calculated values to be 0 for negative numbers, and 100% for all values larger than 100%.

[51] KO Paper, Table IV, pg. 1392.

[52] Howell Report, Section C-IV, footnote 35.

[53] The 24-hr trading volume (in token units) for MAPS, OXY and SRM before the Petition Date and Date (based on CoinMarketCap API) was 2,062,500, 3,085,426, and 380,973,107 respectively. The 24-hr average spot prices for MAPS, OXY and SRM between November 10, 2022 at 10AM

for MAPS, OXY and SRM, where the actual liquidation quantity is the number of tokens actually owned by the two entities (Maps Vault Limited and Oxygen Vault Limited), not the overall amount of such tokens owned by the Debtors. Consequently, the "asset liquidation" discounts per token per entity, based on the KO Model's equation (for the NYSE coefficients) are calculated[54] as:

    a. MAPS Vault Limited:

        i. MAPS discount: 191.0%[54][55]

        ii. SRM discount: 0.8%

    b. Oxygen Vault Limited:

        i. OXY discount: 115.8%[55]

        ii. SRM discount: 1.2%

37. These percentages show that, when the trading volume is adjusted to accurately reflect trading activity closer to the actual Petition Date, the SRM discount value is negligible. Moreover, the discount values for MAPS and OXY have values that are higher than 100%. These values are prohibited for asset discounts, which should range between 0% - 100%, leading to the conclusion that the Howell Report's application of the KO Paper's analysis to relevant cryptocurrency data to calculate the asset liquidation discount yields insupportable results.

EST and the Petition Date and Time (based on CoinMarketCap API) were $0.1071, $0.031 and $0.406 respectively.

[54] Do not differentiate between locked and unlocked tokens, since both categories will get liquidated per the unlocking schedule. MAPS Vault Limited holds a total of 3,921,666,631 MAPS token units and 2,977,644 SRM token units, and Oxygen Vault Limited holds a total of 3,112,825,407 OXY token units and 7,322,783 SRM token units.

[55] According to paragraph 35 of this Report, the KO Paper's formula for transaction costs calculates values over 100%. This proves that the KO Paper's equation was not meant to be used as an asset valuation discount, since it is not properly normalized to represent discount.

Criticism of the Discount for Lack of Marketability Used in The Howell Report

38.   The report incorrectly applies [56] (using the multiplication rule) two incremental discounts to MAPS, OXY and SRM to calculate the total discount: an asset liquidation discount and a DLOM. However, both discounts cannot be applied at the same time, since they both assume that the tokens were sold after the discount is applied. A DLOM cannot be applied after an asset liquidation discount has already been applied. The assets have already been liquidated, so there is no additional discount that could be applied to the digital assets, and thus, the DLOM loses its relevance once an asset is successfully liquidated.

39.   The DLOM method[57] is based on running Monte Carlo simulations, which are used to predict cryptocurrency prices. The discount value is calculated based on the difference between the predicted and the strike prices. However, these simulations cannot accurately capture the complexities of predicted [58] cryptocurrency prices. Therefore, these simulations give completely inaccurate results when their output is compared against the actual cryptocurrency prices they try to predict. Over 100,000 Monte Carlo simulations were run (following the methodology described in the Howell Report) and predicted the values of several cryptocurrencies (including BTC, ETH and SOL). Consequently, the Mean Absolute Percentage Error ("MAPE")[59] was calculated, which is a scale-independent metric that captures the prediction error as a percentage of the actual values and is calculated via the following equation:

$$MAPE = \frac{1}{n} \sum_{t=1}^{n} \left| \frac{A_t - P_t}{A_t} \right| \qquad (2)$$

In Equation (2), A_t is the actual value and P_t the predicted value. The absolute value ensures that the difference is always positive, and the division by the actual value makes MAPE a relative error compared to actual values. As a result, MAPE can be interpreted as a simple relative error which expresses the difference between predicted and actual values as a percentage. Based on MAPE, the relative errors in predicting BTC,

---

[56] Exhibit 1 of the Howell Report: "Summary of Adjustments to Petition Date Prices".

[57] In addition, one of the assumptions is that the cryptocurrency prices follow geometric Brownian motion (under a risk-neutral measure based on the Treasury yield as of the Petition Date) with volatility σ. Cryptocurrency prices start at $1 and their daily values are predicted based on pseudo-randomly generated prices.

[58] One of the assumptions is that the cryptocurrency prices follow geometric Brownian motion (under a risk-neutral measure based on the Treasury yield as of the Petition Date) with volatility σ. Cryptocurrency prices start at $1 and their daily values are predicted based on pseudo-randomly generated prices.

[59] Hastie, T., Tibshirani, R., & Friedman, J. H. (2009). "The elements of statistical learning: Data mining, inference, and prediction (2nd ed.)". Springer.

ETH and SOL are 34.2%, 24.3% and 32.9% respectively[60]. The very high relative error percentages calculated prove that the Monte Carlo simulations used in the Howell Report generate incorrect cryptocurrency values. In essence, the method selected by the Howell Report, which is dependent on the output generated by the Monte Carlo simulations, cannot be used to accurately calculate DLOM specific to cryptocurrencies.

---

[60] Also, calculated MAPE for BNB at 17.3%, XRP at 21.0%, ADA at 20.8%, ROOK at 1,288.2%, PTU at 62.1% and STEP at 42.0%. These high error rates prove that Monte Carlo simulations lack the necessary accuracy for reliable use in predicting cryptocurrency prices.

20

Stout Valuation Analysis

40.   Investors with a large block of tokens may experience difficulty realizing the quoted market or spot prices for their securities when trying to liquidate their holdings within a reasonable period of time due to supply and demand forces. In other words, the tokens could not be disposed of in their entirety by the normal retail method of selling tokens without depressing the quoted price, and thus, a "blockage" method of valuing the tokens will more accurately reflect its value.

41.   **Viable Methods to Liquidate Large Blocks of Tokens Exist.** A blockage discount does present certain liquidity challenges because a large block of securities or tokens cannot ordinarily be liquidated as quickly as a few securities (i.e., it is temporarily illiquid). However, there are various methods to liquidate a large holding of securities or tokens with one of the most common methods being the gradual liquidation of the position over time without causing a significant change in price. The principal variable under this approach is the duration of the liquidation period, which is based in part on analyzing appropriate daily volume trends.

42.   An effective duration of the subject block of tokens was calculated based on their respective unlocking schedule, the assumed daily trading volume of the tokens, and an assumed orderly liquidation of the subject block of tokens based on an assumed increase in the daily trading volume of 10% without depressing the market price.

43.   The owner of the tokens is subject to the risk of a decrease in value over the time period it takes for the orderly liquidation to be completed. Accordingly, it is appropriate to consider the cost the owner would incur to achieve price certainty (i.e., the cost to hedge against any decreases in value of the tokens). The theoretical cost of such a hedge can be quantified using widely accepted financial models, and the resulting cost provides a quantitative indication of a valuation discount. All factors considered, utilized, and placed equal weight on, the implied discounts from the Chaffe Model[61] and the Finnerty Model[62] and which are described below[63].

44.   David B. Chaffe first proposed the Chaffe Model under which he related the cost to purchase a European put option to the relevant discount. For this purpose, the Black-Scholes[64] option pricing model (the "Black-Scholes

---

[61] David B. Chaffe, "Option Pricing as a Proxy for Discount for Lack of Marketability in Private Company Valuations," Business Valuation Review 12 (December 1993): 182-88.

[62] Finnerty, John D. "An Average-Strike Put Option Model of the Marketability Discount." The Journal of Derivatives 19, no. 4 (2012): 53-69.

[63] Our valuation discount was the average between these two well-established valuation methods: The Chaffe and the Finnerty Model. We selected the average, since they both have strengths and weaknesses and the average provides a non-biased estimate of the asset discount.

[64] Robert C. Merton and Myron S. Scholes were jointly awarded the Nobel Memorial Prize in Economic Sciences for their pioneering work on option pricing, which included the Black-Scholes model. Two key academic papers were the following: a) Black, F., & Scholes, M. (1973). The pricing of options and corporate liabilities. The Journal of Political Economy, 81(3), 637-654, and b) Merton, R. C. (1973). Theory of rational option pricing. The Bell Journal of Economics and Management Science, 4(1), 141-183.

21

Model") can be used to determine the value of an "at-the-money" put option using the following inputs: (1) asset price, (2) strike price, (3) time to expiration or maturity (i.e., the effective duration noted above), (4) interest rates, and (5) volatility. Additionally, the Finnerty Model can be used to estimate a discount based on the value of an average-strike price put option using the following inputs: (1) asset price, (2) time to expiration or maturity i.e., the effective duration noted above), (3) volatility, and (4) dividend or distribution yield.

45.   **Elements of Valid Valuation Analysis.** The input data for the valuation methodology followed were collected from the CoinMarketCap API. The prices and daily trading volumes used for the three tokens (as of the Petition Date and Petition Time) were the 24-hour averages[65] for the 24 hours prior to the Petition Date and Time. The volatility used was the annualized 9-month average[66].

46.   Volume trends from 20 cryptocurrencies that are available in the Ethereum blockchain[67], were active for the last 5 years, were not stablecoins, and had average daily volume in USD between $1 million - $30 million were used. These volume trends were translated into the volume profile for MAPS, OXY and SRM during their corresponding unlocking schedules. In essence, this method assumes fluctuations (based on other cryptocurrencies) in the daily trading volume of MAPS, OXY and SRM and does not make the unrealistic assumption that their volume will be constant during their unlocking period of 4 or 5 years.

47.   There is no differentiation between locked and unlocked tokens, since the unlocked tokens follow linear unlocking scheduling and can be sold daily together with the unlocked tokens.

48.   **Results of Analysis.** This valuation analysis was focused on providing a fair value for two different entities, Maps Vault Limited and Oxygen Vault Limited, that hold the following token units of MAPS, OXY or SRM:

    a. Maps Vault Limited

        i. Unlocked MAPS tokens: 919,803,631

        ii. Locked MAPS tokens: 3,001,863,000

        iii. Unlocked SRM tokens: 25,930

---

[65] The average daily trading volume (in units) for the three tokens was: 2,062,501 for MAPS, 3,085,427 for OXY and 380,973,107 for SRM. The spot prices were: $0.1071257 for MAPS, $0.0306372 for OXY and $0.4063157 for SRM.

[66] We reviewed the different time intervals for the volatility of the three tokens and we chose 9 months as the optimal interval (ignoring minima and maxima of the value). For volatile assets, such as these three tokens, a shorter timeframe (for example, shorter than 12 months) is more relevant to reflect recent price movements, which are closer to the Petition Date.

[67] The cryptocurrencies used were: BGB, CRO, ELF, XAUT, PAXG, GNO, IOTX, KCS, LEO, OKB, QNT, RPL, SHIB, SNX, THETA, TKX, TON11419, CBETH, WBETH, WBTC.

iv.   Locked SRM tokens: 2,951,714

b. Oxygen Vault Limited

i.   Unlocked OXY tokens: 974,492,843

ii.   Locked OXY tokens: 2,138,332,564

iii.   Unlocked SRM tokens: 100,474

iv.   Locked SRM tokens: 7,222,309

49.   The results of this analysis, as of the date of this report and based on the foregoing valuation methodology, is that the appropriate discounts (on a per entity basis) as to the Petition Date values of relevant MAPS, OXY and SRM tokens are as follows:

a. Maps Vault Limited

i.   MAPS: 45.41706%

ii.   SRM: 45.99099%

b. Oxygen Vault Limited

i.   OXY: 36.86372%

ii.   SRM: 45.94059%

50.   Based on the calculated discounts and the spot prices of the three tokens as of the Petition Date and Petition Time, the value[68] (in USD) of the tokens that Maps Vault Limited and Oxygen Vault Limited held was:

a. Maps Vault Limited

i.   MAPS: $229,309,262 (calculated by multiplying the number of total tokens of 3,921,666,631 with the MAPS spot price of $0.1071257 with the proportion of value of the assets that remains after the discount is applied.

ii.   SRM: $653,435 (calculated by multiplying the number of total tokens of 2,977,644 with the SRM spot price of $0.4063157 with the proportion of value of the assets that remains after the discount is applied.

b. Oxygen Vault Limited

i.   OXY: $60,212,010 (calculated by multiplying the number of total tokens of 3,112,825,407 with the OXY spot price of

---

[68] As of the Petition Date and Petition Time.

23

$0.0306372 with the proportion of value of the assets that remains after the discount is applied.

ii.   SRM: $1,608,463 (calculated by multiplying the number of total tokens of 7,322,783 with the SRM spot price of $0.4063157 with the proportion of value of the assets that remains after the discount is applied.

IV.   Assumptions and Limiting Conditions

51.   My conclusions are based on the information received to date. I reserve the right to change those conclusions should additional information be provided.

52.   No one that worked on this engagement has any known financial interest in the Claimant or the Respondent or the outcome of the analysis. Further, Stout's compensation is neither based nor contingent on the results of the analysis.

53.   My conclusions are applicable for the stated date and purpose only, and may not be appropriate for any other date or purpose. This report is solely for use in the cited dispute, for the purpose stated herein, and is not to be referred to or distributed, in whole or in part, without prior written consent.

Fotis Konstantinidis
Managing Director
Stout Risius Ross, LLC

EXHIBIT A

LIST OF DOCUMENTS/SOFTWARE TOOLS RELIED UPON

[1] All documents and software code provided to us related to the Howell Report and the Lu Report.

[2] "Maps - White Paper", January 2021: https://maps.me/token/MAPS.pdf

[3] "MAPS.me" mobile application URL at: https://maps.me/

[4] "Oxygen: The Prime Brokerage Protocol", White Paper, December 2020: https://www.oxygen.org/Oxygen.pdf

[5] "Serum – White Paper", July 2020: https://assets.website-files.com/61382d4555f82a75dc677b6f/61384a6d5c937269dbed185c_serum_white_paper.88d98f84.pdf

[6] Allison, Ian, "Divisions in Sam Bankman-Fried's Crypto Empire Blur on His Trading Titan Alameda's Balance Sheet," CoinDesk, November 2, 2022, available at https://www.coindesk.com/business/2022/11/02/divisions-insam-

bankman-frieds-crypto-empire-blur-on-his-trading-titan-alamedas-balance-sheet.

[7] CoinMarketCap cryptocurrency data API: https://coinmarketcap.com/api/.

[8] CoinGecko cryptocurrency data API: https://www.coingecko.com/en/api.

[9] Coinpaprika cryptocurrency data API: https://coinpaprika.com/api/.

[10] Dune Query (https://dune.com/browse/queries)

[11] "Explore Solana Blockchain", SolScan (https://solscan.io/)

[12] Cointelegraph article, "Alameda wallets become active days after SBF bail, community mulls foul play", December 28, 2022: https://cointelegraph.com/news/alameda-wallets-become-active-days-after-sbf-bail-community-mulls-foul-play

[13] Raydium decentralized exchange: https://raydium.io/

[14] HTX cryptocurrency exchange: https://www.htx.com/en-us/.

[15] Gate.io cryptocurrency exchange: https://www.gate.io.

[16] "Sampling Techniques", Third edition, William G. Cochran, John Wiley & Sons, 1977.

[17] Kyle, Albert S. and Anna A. Obizhaeva, "Market Microstructure Invariance: Empirical Hypotheses,", Econometrica, Vol. 84, No. 4, 2016, pp. 1345-1404.

[18] S&P Global: https://www.spglobal.com/marketintelligence/en/.

[19] Hastie, T., Tibshirani, R., & Friedman, J. H. (2009). "The elements of statistical learning: Data mining, inference, and prediction (2nd ed.)", Springer.

[20] David B. Chaffe, "Option Pricing as a Proxy for Discount for Lack of Marketability in Private Company Valuations," Business Valuation Review 12 (December 1993): 182-88.

[21] Finnerty, John D. "An Average-Strike Put Option Model of the Marketability Discount." The Journal of Derivatives 19, no. 4 (2012): 53-69.

[22] Black, F., & Scholes, M. (1973). The pricing of options and corporate liabilities. The Journal of Political Economy, 81(3), 637-654.

[23] Merton, R. C. (1973). Theory of rational option pricing. The Bell Journal of Economics and Management Science, 4(1), 141-183.

[24] "Python Programming Language": https://www.python.org/

[25] "R Software Environment for Statistical Computing": https://www.r-project.org/

[26] "Nansen Analytics": https://www.nansen.ai/

[26] "20_ERC20_Avg - v3.xlsx"

[27] "CMC_12month average_MAPS_OXY_SRM.xlsx"

[28] "CMC_12month_daily.xlsx"

[29] "CMC_12month_daily_quote.xlsx"

[30] "CMC_24h_priceUSD_volumeToken.xlsx"

[31] "CMC_hourlyPrice_24hVolume.xlsx"

[32] "Coingecko-maps-usd-max.xlsx"

[33] "Coingecko-oxy-usd-max.xlsx"

[34] "Coingecko-srm-usd-max.xlsx"

[35] "CoinPaprika_MAPS_price_custom_2024-01-21.xlsx"

[36] "CoinPaprika_SRM_price_custom_2024-01-21.xlsx"

[37] "Crypto Large Transactions Analysis.xlsx"

[38] "Duration Analysis - All Tokens.xlsx"

[39] "FTX_DA_EST_000000038_sliced.csv"

[40] "GateIO_MAPS_USDT - gate.io.xlsx"

[41] "GateIO_OXY_USDT - gate.io.xlsx"

[42] "GateIO_SRM_USDT - gate.io.xlsx"

[43] "Howell_6month_avg_volume.xlsx"

[44] "maps_coin_crypto.csv"

[45] "maps_usd_crypto.csv"

[46] "MC - Simulated Prices - Analysis.xlsx"

[47] "oxy_coin_crypto.csv"

[48] "'oxy_usd_crypto.csv"

[49] "Queries on Dune.txt"

[50] "Secondary Offerings Industry Screening 2024_v2.xlsx"

[51] "Simulated Prices.xlsx"

[52] "srm_coin_crypto.csv"

[53] "srm_usd_crypto.csv"

[54] "KO Input.xlsx"

[55] "KO Output.xlsx"

[56] "Dune Query - MAPS - 1.16.2024.xlsx"

[57] "Dune Query - OXY- 1.16.2024.xlsx"

[58] "Dune Query - SRM - 1.16.2024.xlsx"

EXHIBIT B

CURRICULUM VITAE

Fotios Konstantinidis

fkonstantinidis@stout.com

https://www.stout.com/en/professionals/fotis-konstantinidis

PROFFESIONAL SUMMARY

- Over 20 years of experience in data mining, advanced statistics and data analytics, data strategy, and integration of digital technologies in several industries.
- Senior leadership on digital transformation and data analysis; application of a broad range of machine learning and statistical algorithms to maximize real business value. Program lead for large digital initiatives for private and public companies; launched agile-driven digital products that were presented in international conferences and workshops.

PROFESSIONAL EXPERIENCE

STOUT, LOS ANGELES , CA   **AUG. 2019 – PRESENT**

Managing Director – Head of AI and Digital Transformation

- Global Digital Practice Lead offering 5 service lines: 1) Data strategy, 2) Data Analytics & Business Intelligence, 3) Prediction/Forecasting based on machine learning models, 4) Robotic Process Automation, and 5) Cybersecurity assessment and regulatory compliance.

CO-OP FINANCIAL SERVICES, RANCHO CUCAMONGA , CA DEC. 2017 – JUL. 2019

Senior Vice President – Fraud Products

- Led product development and portfolio management of all fraud and authentication products of the organization in all channels (mobile, online, contact center, ATM).
- P&L owner ($100MM+ in revenue) for the Fraud and Contact Center Products portfolio.
- Oversaw strategy and delivery of the most advanced digital solutions that apply advanced analytics to all current and future solutions.
- Responsible for successful delivery of the first, in-house, AI-based fraud platform, named "Cooper", which combines rules with advanced AI.

McKINSEY & COMPANY, LOS ANGELES, CA   **FEB. 2017 – DEC 2017**

Senior Digital Manager/Associate Partner – IoT Lead

- One of the first experienced hires to lead newly formed Digital McKinsey in the intersection of IoT and payments.
- Delivered rapid prototypes and digital products by collaborating with several leading high-tech companies.
- Defined digital strategy for financial services clients based on big data analysis.

VISA, SAN FRANCISCO, CA   **SEP. 2015 – FEB. 2017**

Senior Director – Innovation and Strategic Partnerships – Connected Car Lead

- Designed and delivered data-driven, pre-production pilots primarily in the connected car space.
- Collaborated with car OEMs, merchants, issuers, and acquirers and presented consumer experience in international conferences, like CES, MWC, SXSW, among others.

- Led business development efforts and established deep relationships with different players in the connected car/IoT ecosystem.

ACCENTURE, LOS ANGELES, CA   **FEB. 2011 – SEP. 2015**
Senior Manager – Silicon Valley IoT Lead
- Led the design and incubation of new digital and mobile applications leveraging mobility, analytics and big data in concert with data scientists, software developers, client teams and the VC community.
- Designed and deployed digital business transformation strategies on behalf of Fortune 500 companies utilizing cloud-based functionality and leveraging data mining algorithms and API management.
- Select clients where advanced digital solutions were sold and delivered include: E-Trade, Apple, American Express, Motorola, Northwestern Mutual, Halliburton.

MEGO, LOS ANGELES, CA   **SEP. 2007 – NOV. 2010**
Chief Technology Officer
- Managed 30+ developers and designers to launch a first-of-its-kind multimedia, portable profile website.
- Ensured $3M round "B" funding from multiple angels and achieved 300% user increase to 1.5 million users.
- Led cloud migration efforts and architected recommendation engine to provide personalized user experience.
- Introduced virtual economy and deployed digital wallet in main platform.

MODERATI / SKYROCKIT, SAN FRANCISCO, CA   **JUL. 2005 – JUL. 2007**
Technical Lead
- Managed development teams to deliver high-end, data-driven mobile applications for several clients in the music industry, including VH1 and CMT
- Led development of Qualcomm-awarded, in-house application "modtones".

LOTUS INTERWORKS, LOS ANGELES, CA   **AUG. 2004 – JUN. 2005**
Technical Lead
- Managed large development teams in India and the US to build over 30 mobile applications and games for well-known game publishers, including THQ, I-play, mForma.
- Architected and led implementation of 3D rendering software in mobile games.

LABORATORY OF NEURO IMAGING, LOS ANGELES, CA **OCT. 2002 – JUL. 2004**
Computational Brain Researcher
- Developed brain software that ensured $800k grant from the National Institute of Health (NIH) to further pursuit the Mouse Atlas Project.
- Led software development teams in applying data mining and 3D visualization techniques to MRI scans of the human brain.
- Developed and implemented machine learning algorithms for finding patterns on patients with Alzheimer's disease and schizophrenia.

STREAM ENGINEERING/RTOT
  Co-Founder/CTO   **JUL. 2000 – MAR. 2003**
- Co-founded two Europe-based start-up companies (Stream Engineering, RTOT)

funded by European programs with $2M for 2 years.

EDUCATION

- **M.S. Computer Science** (Outstanding M.S. Award), University of California, Los Angeles, 03/03
- **M.S.** (equivalent) **Chemical Engineering**, University of California, Los Angeles, 09/00
- **M.S. Geophysics and Space Physics** (Honors), University of California, Los Angeles, 09/99
- **B.S. Physics** (Valedictorian), Aristotle University of Thessaloniki, Greece, 10/97

TESTIMONY EXPERIENCE

- North American Lighting, Inc., v. AML Systems, Chicago Office of the International Centre for Dispute Resolution, American Arbitration Association, 2022

ACADEMIC HONORS/AWARDS

- Outstanding M.S. award, Computer Science department, UCLA, March 2003
- Microsoft Fellowship for the Guerilla .NET – C# Workshop, December 16-20, 2002, Torrance, CA.
- Onassis Foundation Scholarship for Excellence in Academic Achievement for 2000-2002.
- Recipient of the ARCO Fellowship, September 1999 - June 2000.
- Recipient of the UCLA Tuition Fellowship Award for 1997-2003.
- First Place in School of Sciences (Informatics, Physics, Math, Chemistry, Biology, Geology), Aristotle University of Thessaloniki, Greece, October 1996.
- Three Greek State Merit Scholarships for First Place (1993-1995).
- Invited Talk in the Workshop/Symposium on Mathematical Physics "Hyperfunctions, Operator Theory and Dynamical Systems", 6-12 January 1997, Brussels, Belgium, chaired by the 1977 Nobel Laureate in Chemistry, Dr. Ilya Prigogine.
-

ACADEMIC (PAST) MEMBERSHIPS

- Member of the International Society of Computational Biology (ISCB).
- Member of the Institute of Electrical and Electronics Engineering (IEEE) Computer Society.
- Member of the Association for Computing Machinery (ACM).
- Member of the American Institute of Chemical Engineers (AIChE).
- Local Organizing Committee Member for the 8th European Meeting on Solar Physics: Solar & Heliospheric Plasma Physics, 13-18 May 1996, Thessaloniki, Greece.

ARTICLES/PUBLICATIONS/CONFERENCES

1. "Discovering NFTs: What Your Company Needs to Know About NFTs in 2023", Practising Law Institute (PLI), December 2023: https://www.pli.edu/programs/unpacking-the-boom-what-your-company-needs-to-know-about-nfts
2. "Data Analytics' Importance in Compliance: What Companies Need to Know", ALM | Law.com, August 2023: https://www.law.com/thelegalintelligencer/2023/08/21/data-analytics-importance-in-compliance-what-companies-need-to-know
3. "Cryptocurrency and NFT Tax Considerations Based on Recent IRS Strategy and Guidance", Bloomberg Tax, Tax Management Memorandum, June 2023, https://www.stout.com/en/insights/article/cryptocurrency-nft-tax-considerations-based-recent-irs-strategy-guidance
4. "NFT Taxation: What Guidance Currently Exists and Using Established Tax Principles to Fill the Voids", Practising Law Institute (PLI), November 2022, https://www.pli.edu/programs/unpacking-the-boom-what-your-company-needs-to-know-about-nfts?t=ondemand&p=352814#SEG136675
5. "The Trials and Tribulations of NFT Valuation in the Marketplace", Bloomberg Tax, October 2022: https://news.bloombergtax.com/tax-insights-and-commentary/the-trials-and-tribulations-of-nft-valuation-in-the-marketplace
6. "The Wild West: Valuing Cryptocurrency During a Time of Volatility", Bloomberg Law, March 2022: https://news.bloomberglaw.com/daily-tax-report/the-wild-west-valuing-cryptocurrency-during-a-time-of-volatility
7. "Why Data Analytics Can be Crucial in Litigation Outcomes", Stout.com, March 2023: https://www.stout.com/en/insights/article/why-data-analytics-can-be-crucial-litigation-outcomes
8. "Why Cybersecurity Can't Be Ignored", Stout.com, November 2021: https://www.stout.com/en/insights/article/why-cybersecurity-cant-be-ignored
9. "Today's Data Governance: Lost in Translation Schrems II, CPRA, and Maintaining a Current Data Inventory", Presentation at Association of Corporate Counsel (ACC) San Francisco, January 2021: https://www.acc.com/education-events/2021/race-finish-2021-day-2
10. "Can Machine Learning Help Cybersecurity Systems?", Stout.com, September 2020: https://www.stout.com/en/insights/article/can-machine-learning-help-cybersecurity-systems
11. Why Data Analytics Can be Crucial in Litigation Outcomes", March 2023: https://www.stout.com/en/insights/article/why-data-analytics-can-be-crucial-litigation-outcomes
12. "5 Tech Challenges for Healthcare IT Leaders", Stout.com, March 2021: https://www.stout.com/en/insights/infographic/5-tech-challenges-healthcare-it-leaders
13. "IT Modernization in the Healthcare Industry", Stout.com, February 2021: https://www.stout.com/en/insights/article/it-modernization-healthcare-industry
14. "New IT Remedies for Healthcare Organizations", Stout.com, September 2020: https://www.stout.com/en/insights/article/new-it-remedies-healthcare-organizations
15. "How Advanced Analytics Helps Prevent Patient Leakage in Healthcare Organizations", Stout.com, August 2020: https://www.stout.com/en/insights/article/how-advanced-analytics-helps-prevent-patient-leakage-healthcare
16. "Preparing a company to go public", Accounting Today, October 2022, https://www.accountingtoday.com/opinion/preparing-a-company-to-go-public

17. "Data Analytics Software Provides Value for ASC 606 Compliance", Bloomberg Tax, August 2022, https://news.bloombergtax.com/tax-insights-and-commentary/data-analytics-software-provides-value-for-asc-606-compliance

18. "Why and how to run machine learning algorithms on edge devices", The Robot Report, February 2020, https://www.therobotreport.com/why-and-how-to-run-machine-learning-algorithms-on-edge-devices/

19. "Optimizing Data Strategies", Stout.com, January 2020, https://www.stout.com/en/insights/article/optimizing-data-strategies

20. "How CFOs Can Leverage RPA Software to Automate Invoice Processing", Stout.com, https://www.stout.com/en/insights/article/how-cfo-can-leverage-rpa-software-automate-invoice-processing

21. "Digital Trends for the CIO Amid the COVID-19 Pandemic", Stout.com, https://www.stout.com/en/insights/article/digital-trends-cio-amid-covid-19-pandemic

22. "The Future of Artificial Intelligence", Stout.com, https://www.stout.com/en/insights/commentary/future-artificial-intelligence

23. "Looking Ahead in 2019: A.I. Needed to Level Fraud-fighting Playing Field", Cornerstone CU League Magazine, July 2018, https://www.cornerstoneleague.coop/docs/default-source/Communications-Documents/perspectives/perspective-vol-14-issue-1.pdf?sfvrsn=0

24. "3 Powerful Reasons to Invest in AI Today", CUES (Credit Union Executives Society), July 2018, https://www.cumanagement.com/blogs/2018/07/26/3-powerful-reasons-invest-ai-today

25. Ivo D Dinov 1, Daniel Valentino, Bae Cheol Shin, Fotios Konstantinidis, Guogang Hu, Allan MacKenzie-Graham, Erh-Fang Lee, David Shattuck, Jeff Ma, Craig Schwartz, Arthur W Toga, "LONI visualization environment", J Digit Imaging, 2006, Jun;19(2):148-58.

26. Allan MacKenzie-Graham, Erh-Fang Lee, Ivo D. Dinov, Mihail Bota, David W. Shattuck, Seth Ruffins, Heng Yuan, Fotios Konstantinidis, Alain Pitiot,Yi Ding, Guogang Hu, Russell E. Jacobs, Arthur W. Toga, " A multimodal, multidimensional atlas of the C57BL/6J mouse brain", J.Anat. (2004) 204, pp 93-102.

27. F. Konstantinidis, D.Stott Parker, "Testing the numerical sensitivity of simulation codes using Monte Carlo arithmetic", Technical Report CSD-9200187, UCLA, Computer Science Department, February 2003

28. F. Konstantinidis, H. C. Kim and V. Manousiouthakis, "Simulation of a Weakly Ionized Plasma Driven by Various Voltage Waveforms", 1999 Annual AIChE Meeting, October 31 - November 5, 1999, Dallas, TX.

29. F. Konstantinidis, H.C. Kim, "An Optimization Algorithm Applied to Weakly Ionized Plasmas", 1999 Annual AIChE Meeting, October 31 - November 5, 1999, Dallas, TX.

30. F. Konstantinidis, K. Holiastos, "Use of Monte-Carlo Methods in Reaction Engineering", 1999 Annual AIChE Meeting, October 31 - November 5 1999, Dallas, TX.

31. F. Konstantinidis, C. T. Russell, D. E. Huddleston, K. K. Khurana and M.G. Kivelson, "Magnetic Evidence for an Extended Europa Wake", 1998 Fall AGU Meeting, San Fransisco.

32. G. Le, C. T. Russell, D. E. Huddleston, R. J. Strangeway, and F. Konstantinidis, "POLAR Observations of Ion Cyclotron Waves in the Cusp", 1998 Fall AGU Meeting, San Fransisco.

33. C. T. Russell, D. E. Huddleston, F. Konstantinidis, M. G. Kivelson and K. K. Khurana, "Sources and Losses of the Jovian Plasma, 1998 Fall AGU Meeting", San Fransisco.

34. C. T. Russell, D. E. Huddleston, F. Konstantinidis, M. G. Kivelson, K. K. Khurana, "The Unsteady Circulation of the Jovian Plasma", DPS Conference, October 11-16, 1998, Madison, Wisconsin.

35. D. E. Huddleston, C. T. Russell, F. Konstantinidis, R. J. Strangeway , X. Blanco-Cano, "Wave Particle Interactions at Io", DPS Conference, October 11-16 1998, Madison, Wisconsin.

36. F. Konstantinidis, C. T. Russell, D. E. Huddleston, K. K. Khurana, M. G. Kivelson, "The Europa Plume as Observed by the Galileo Magnetometer", DPS Conference, October 11 – 16, 1998, Madison, Wisconsin.

37. M. Gedalin, F. Konstantinidis, C. T. Russell, D. E. Huddleston and R. J. Strangeway, "Properties of the Ion Cyclotron Waves in the Neighborhood of Io: Results from Wavelet Analysis", 1998 Spring AGU Meeting, Boston.

38. F. Konstantinidis., C. T. Russell, D. E. Huddleston, R. J. Strangeway and M. Gedalin, "Properties of the Ion Cyclotron Waves in the Neighborhood of Io: Results from Fourier Analysis", 1998 Spring AGU Meeting, Boston.

39. F. Konstantinidis, "Linear Filters for the Prediction of the Geomagnetic Activity", 4th National Conference in Complexity and Chaotic Dynamics in Non-linear Systems, 22 July-2 August 1996, Patras, Greece.